Check 36. Proceeding NICTE-3.pdf

by Arta Moro Sundjaja

Submission date: 08-Nov-2018 09:24AM (UTC+0700)
Submission ID: 624024364
File name: 36._Proceeding_NICTE-3.pdf (442.49K)
Word count: 3737
Character count: 20960

Evaluation of the used of visual electronic banking system application using UTAUT 2 in Bank Central Asia corporation

Evaluation of the used of visual electronic banking system application using UTAUT 2 in Bank Central Asia corporation

Ahmad Nurul Fajar[1], Frits Septian Johanes[2], Abba Suganda Girsang[3], Gunawan Wang[4]

[1,2,3]Information Systems Management Department, BINUS Graduate Program – Master of Information System Management, Bina Nusantara University, Jakarta, Indonesia
[4]Computer Science Department, BINUS Graduate Program – Master of Computer Science, Bina Nusantara University,
Jakarta, Indonesia

Email: afajar@binus.edu[1], frits.ririhena@rocketmail.com[2], agirsang@binus.edu[3], gwang@binus.edu[4]

Abstract. The purpose of this study is to determine the factors that encourage the use of visual electronic banking system (VEBS) application in Bank Central Asia Corporation, and provide an idea to increase the use of VEBS. This study using UTAUT 2 model approach. The primary data obtained from interviews, direct observation and questionnaires that distributed and processed using SEM-PLS. The results of this study provide qualitative calculation results of UTAUT 2 variable. The conclusion obtained that interest of the use of application VEBS affected by variables facilitating condition, performance expectancy and behavioral intention. From these conclusions this study provided an idea to the future development of application's features for more effective and efficient use.

1. Introduction

Business processes within a company is already headed to the use of information system technology. The use of information technology is always evolving over time. The company evolution to the use of information technology within a business process cannot be separated from the company's strategy to compete with other companies. The use of information technology tools into a process, influence the change or work processes become shorter, use less time[1], and the work of human resources becomes more efficient. Customer satisfaction is one of company success key factor. Customer satisfaction can be met, if the services that provided by the company to customers running properly and in accordance with the expectations of the customers themselves. However, the services provided companies sometimes encounter problems, both technical and non-technical, which may cause complaints from customers. Complaints can occur when the service provided to the customer company itself does not function as it should. Companies are required to be able to answer and address any complaints from customers, so that customers do not lose confidence in the services provided by the company [2]. Customer complaints for the company also can make the decision to devise a strategy to business processes[3] .Bank Central Asia Corporation – one of most popular bank in Indonesia, considered that the handling of complaints is important to be attentive. To follow up on the complaints of the customer, Bank Central Asia Corporation has a special complaint handling bureau, which handles complaints that related to

electronic banking transactions. The bureau known as the bureau of transaction services electronic banking (SPC) under division electronic banking service center (SLPE). Bureau responds the complaints from customers associated with transactions in electronic banking as a transaction engine that uses ATM (Automated Teller Machine) or EDC (Electronic Data Capture). In daily complain handling activity, they use information system application called Visual Electronic Banking System (VEBS). VEBS application has main function, such as (1). Interfaces for correction of debit / credit account balances related to customer transactions, (2). Monitoring and verification report customer complaints, (3). Documentation of activity corrections to customer complaints, and (4). Make corrections activity report related to customer complaints. VEBS application that currently used is version 3 which is implemented in January 2016. VEBS version 3 is development from VEBS previous version, which is modified version of desktop applications to the web version, with the addition of features to improve usability. This VEBS application implementation affect the business process flows within the bureau SPC, primarily related to the efficient use of hardcopy documents. VEBS 3.0 now has a major correction module and correction module support. The main correction module is Debit / Maestro acquirer, Cirrus / Maestro issuer, Prima, Flazz, Sakuku and manual correction support. Correction outline is to process debit / credit correction to customer account balances or other bank accounts that registered in the BCA. The correction is related to the mismatch transaction that occurs on systems when customers make transactions.UTAUT2 (Unified Theory of Acceptance and Use of Technology) model is the development of a UTAUT model that used to measure the acceptance of Information Technology. UTAUT 2 adds three new construct that consist of hedonic motivation, price value, and the habits [4]. The purpose of this study was to determine the factors in UTAUT Model 2 which encouraged the use VEBS application, to be used as a reference for future development of VEBS. The purpose of this case study is to know the factors that encourage the use VEBS applications, as well as providing input for increased use VEBS applications. This research is expected to provide benefits theoretically, to be able to understand the theory in the acceptance of a new information system, as well as better understand the factors that influence the acceptance of the new system. This study is expected to provide benefits to Bank Central Asia Corporation in order to determine the factors related to the acceptance of the application VEBS, for future VEBS applications development and make better application performance.

II. Literature Review

Customer dissatisfaction caused by several reason such as the difference between the expectations of the customers and the services provided by the organization. The customer dissatisfaction, leading to the emergence of customer complaints related to the organization or company [5]. Customer complaint is the negative expression of the customer associated with poor services and products provided by the company [6]. Complaints from customers may be submitted by mail, electronic mail (email), phone, or go directly to the office of the company concerned. Complaints from customers may provide a distinct advantage to the company [5]. Electronic banking or also known as the electronic fund transfers using computers and electronic technology to carry out checks and other banking transactions. Electronic Banking allows users to perform authorization and access your bank account, card or code. Some financial institutions used ATM or PIN numbers for transactions Electronic Banking. Similar services, some use scanning technology. For example, uses radio frequency (RFID) or other technologies that do not require direct contact with the device [7]. Visual Electronic Banking

System (VEBS) is an internal application created in Bank Central Asia Corporation, which is broadly used for handling complaints or complaints from customers. Complaints are handled using VEBS applications are complaints related to customer transactions Bank Central Asia Corporation via electronic banking facilities. Unified theory of acceptance and use of technology or UTAUT 2 is the development model of UTAUT previous models, which are used to describe the user acceptance of an information technology-based service [4]. UTAUT 2 has seven construct that drives the intensity of the habit of using the technology [4].

III. Research Method

This study aims to evaluate the use of visual electronic banking system (VEBS) as an application for handling customer complaints in Bank Central Asia Corporation. The evaluation was conducted to determine the factors associated with user acceptance of the application VEBS, so do system design proposal for the development of next VEBS. Evaluation of the use of the application VEBS is done by using unified theory of acceptance and use of technology 2 or UTAUT 2.VEBS application usage for handling complaints is mandatory in the SPC Bureau, so the variable age (age), sex (gender) and experience (experience) were excluded from this study model. Additionally, the application does not require fees VEBS so construct price value no input into this model, so the model research on VEBS application can be seen in Figure 1 below :

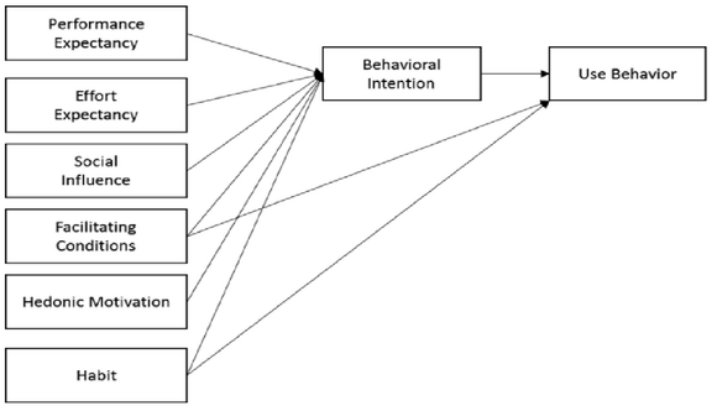

Figure 1. UTAUT models in the evaluation of applications VEBS

The framework for the evaluation VEBS applications are as follows: (1). *Planning:* VEBS version 3 is expected to make the complaint handling process to be efficient electronic banking transactions. Until now, early planning is done by direct observation regarding the use of VEBS applications in SPC Bureau, (2). *Collecting the basic theory :* The theoretical basis is needed to obtain a theoretical reference about the formulation of the problem, and to get the method- related methods of data collection and data analysis, (3). *Data collection*: data collection was performed by using a survey questionnaire distributed to all users listed in the application VEBS in handling complaints bureau. The answers to the questionnaire are primary data for this study. The questionnaire contains questions prepared by a construct of UTAUT2 with answers using a likert scale. Likert scale used to measure attitudes, opinions and perceptions related to a symptom [8], (4). *Data analysis* : from the survey, data will be processed to obtain the factors that influence the use of applications VEBS, (5). *Writing*

reports : from the analysis and data processing, will now be made ideas and input for the development of next VEBS application, so use VEBS applications become more effective and efficient. Research and recommendations regarding the use of applications VEBS. This research is an evaluative research. Evaluative research conducted to obtain results related to the success or failure of a program, or the benefits gained from a policy [9].This study was done to the bureau of transaction services electronic banking located in the headquarters of Bank Central Asia Corporation, Asia Corporation 2 West Jakarta. The research was carried out for two months. The data obtained from this study are primary data, in the form of survey results obtained directly from the questionnaire to the Bureau staff Redress in Bank Central Asia Corporation. The collection of data to obtain information about application usage VEBS done in the following manner: (1). *Observation:* the observations were made by observing the direct use of the application in the Bureau VEBS Redress in Bank Central Asia Corporation, (2). *Questionnaire:* provide a set list of questions given to respondents, (3). *Interview:* interviews were conducted to obtain additional information relating to the use VEBS applications, beyond the questions asked in the questionnaire

IV. Result and Discussion

PLS-SEM (partial least squares structural equation modeling) is a model to determine the relationship between the latent variables based variant [10]. PLS-SEM is different from covariance-based SEM, which can be used for variables that have a reciprocal relationship. PLS-SEM, is only used to model the relationship between variables is unidirectional [10].Model PLS-SEM models are divided into outer and inner model [10]. Inner structural model describe the relationship between a construct that will be evaluated. Outer measurement model describing the relationship between indicators and related construct. In this study, the terms required the respondent in accordance with the criteria of at least 10 times the amount of the magnitude of the most formative indicator used to measure one latent variables [10]. In UTAUT research model in this study, the number of formative indicator was 4 indicators, so that in the questionnaire used a sample of 60 respondents VEBS application users. First step is a model specification, figuring the relationship between indicators and variables. Having created the model specification and obtain inner and outer model, the next step is to check by using SEM-PLS algorithm, and the results of SEM-PLS algorithm to do the calculations for the real and outer construct validity of the model. The evaluation process of the outer model, created using software Smart PLS 3.0. Loading factor is the correlation between indicator-indicator of a latent variable. The standard value of loading factor that can be received is greater than 0.6. From the above table in mind one last valuable loading factor below 0.6 which FF3 at 0.4760, so to FF3 is issued as an indicator because it is below 0.6. Once removed indicator FF3, then the entire loading factor be above 0.6, so all indicators become valid. New model specification that shown in figure 4.After the evaluation of the outer models and models available that meet the criteria and valid, then performed an evaluation of the inner workings of the model. Inner evaluation phase of this model was using the same software that is called Smart PLS 3.0. From the value of f^2 above can be seen that the most substantial influence is BI -> UB, which amounted to 1,083, while the smallest is HB -> BI. From the results of calculations using SEM-PLS to construct in the model studies using model approach UTAUT 2 above, showed that the construct facilitating condition that most affect users' interests in using application VEBS. The positive influence construct facilitating condition, can be seen from the path coefficient value construct facilitating condition on behavioral intention, at +0.579, where the path coefficient shows

facilitating condition affects behavioral intention. The amount of influence on the behavioral intention facilitating condition can be seen from the F-Square or the effect size to construct facilitating condition on behavioral intention, of 0303, which amount is in the range of moderate to strong effect. So is the relationship with the use behavior which the path coefficient of 0.018.The coefficient of performance expectancy is equal to 0.293, which means, there is a positive relationship between performance expectancy with behavioral intention. That is, the greater the value, the greater performance expectancy behavioral intention. The coefficient for social influence is at 0.158 which means that there is a positive relationship between social influencing with behavioral intention. That is, the greater the value, the greater social influence behavioral intention. The coefficient for hedonic motivation is equal to 0.140, which means, there is a positive correlation between hedonic motivating with behavioral intention. That is, the greater the value, the greater hedonic motivation behavioral intention. The coefficient for the effort expectancy is at -0.322, which means, there is a negative relationship between effort expectancy with behavioral intention. That is, the value of effort expectancy is inversely proportional to the magnitude behavioral intention. The coefficient for the habit is equal to -0.011, which means, there is a negative relationship between the habit behavioral intentional. That is, the value of habit is inversely proportional to the magnitude of behavioral intention. The coefficient for behavioral intention amounted to 0.775, which means, there is a positive relationship between behavioral intentional to use behavior. That is, the greater the value, the greater behavioral intention use behavior. VEBS application created to facilitate the work of the Bureau of Electronic Banking Transaction Service (SPC), in terms of effectiveness, speed and efficiency. VEBS give change in terms of the use of paper, where before there is an application VEBS web version of this document attachments consent form along with proof of transactions and transaction history, physically distributed. With the application VEBS web version the document is no longer physically distributed, both document approval and document attachments. Approval is done directly in the application, after it has finished processing by the operator. In addition, this VEBS application also store data related to the handling of complaints that can be exported to a monthly or annual report preparation. The existence of this VEBS helped users to complete jobs faster and more productive, because it reduces the activity of printing and scanning documents. However, when seen from the assessment questionnaire on performance variables expectancy on the indicator "I became more productive by using the application VEBS", although valid, but has the lowest. To that end, the proposed development is the next VEBS, VEBS application can generate an automatic report in accordance with the criteria required, so users can more quickly produce reports required, either daily, monthly, and annual reports. VEBS web version, an updated version of the previous version VEBS based desktop applications. The difference between VEBS web version with previous VEBS are very significant, so users need to relearn this VEBS application usage. For new users who want to use the application VEBS can learn the user manual documentation that may be requested to related parties. However, the assessment questionnaire on the variable effort expectancy in the indicator "To learn how to use the application VEBS it easy" is at its lowest value. For that, given the proposal in order to facilitate the users to learn VEBS applications, it can provide a tutorial on the application VEBS menu, so users can directly access the tutorial via VEBS applications with ease, without the need to request documents to the associated user manual. Availability of facilities needed VEBS users in using the application affect the interests of users in the use VEBS applications. VEBS currently web-based, making it easier to do maintenance in the event of operational problems that use this application. VEBS

maintenance process is now more easily done, compared to when I was a desktop-based application. VEBS is now even more accessible in the PC client, because every PC client pre-installed browser and connect to the internal network Bank Central Asia Corporation. VEBS application is made and used by the Bank Central Asia Corporation, so if there are users who have difficulties or need assistance, can easily contact the relevant parties. However, when seen from the results of the questionnaire, an assessment of the criteria "I can easily contact the relevant parties, when I encounter difficulties or problems in the application of this VEBS" though valid, but has the smallest average. So that it can be proposed to the parties concerned, to provide documentation to troubleshoot when there are constraints experienced VEBS users, so users can make improvements VEBS first, before asking to related parties. Corrective measures granted restricted according to the user access rights to applications VEBS. The use VEBS strongly supported by the boss at the Bureau of Electronic Banking Services, it can be seen from the assessment Social Influence variables that have the highest value on the indicator "Bosses / my supervisor supports me in using this VEBS application". It is expected to influence the big boss, the boss users can also evaluate the use of VEBS to obtain proposals - proposals for VEBS development of operational user side.

V. Conclusion

From the results of evaluation of the use of Visual Electronic Banking System in Bank Central Asia Corporation, conclusions can be drawn as follows: Based on calculations using SEM-PLS against UTAUT two variables in this study, the variables that most influence the use VEBS is facilitating variable condition, which is the level of trust users on the availability of infrastructure associated with support for the use of a system. Variable facilitating condition was positively related to behavioral intention to influence the powers that be in the range of moderate to strong. Besides facilitating condition, other variables that affect the use VEBS are performance expectancy which is a measure the extent to which a system can provide benefits or advantages in their use, and social influence, namely the extent to which users feel that others (example :family and friends) are confident that they must use certain technologies. Related to the level of trust users to the availability of infrastructure in support of the use of a system, for the development of the future, can be considered the availability of menu tutorial on the application VEBS, so that users can directly access the tutorial via the application VEBS easily, without the need to request documents user manual to related parties. In order to improve user productivity, you can add modules to generate automated reports in accordance with the criteria required, so users can more quickly produce reports required, either daily, monthly, or yearly reports .

References

[1] E. Turban, L. Volonino and G. R. Wood, Information Technology for Management: Advancing Sustainable, Profitable Business Growth, 9th Edition, Wiley Global Education, 2012.

[2] N. Gambetta, A. Zorio-Grima and M. A. García-Benau, "Complaints Management and Bank Risk Profile," *Journal of business research, Volume 68, Issue 7,* pp. 1599 - 1601, 2015.

[3] N. Y.-M. Siu, T. J.-F. Zhang and C.-Y. J. Yau, "The Roles of Justice and Customer Satisfaction in Customer Retention A Lesson from Service Recovery," *Journal of Business Ethics,* pp. 675 - 686, 2013.

[4] V. Venkatesh, J. Y. Thong and X. Xu, "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology," *MIS Quarterly, Vol. 36, No. 1,* pp. 157-178, 2012.

[5] S. Garding and A. Bruns, Complaint Management and Channel Choice, Springer, 2015.

[6] A. Faed, An Intelligent Customer Complaint Management System with Application to the Transport and Logistics Industry, Switzerland: Springer, 2013.

[7] Commission Federal Trade, Electronic Banking, Commission Federal Trade, 2012.

[8] H. Djaali and P. Muljono, Pengukuran Dalam Bidang Pendidikan, Jakarta: Grasindo, 2008.

[9] S. Schumacher and J. H. McMillan, Research in Education: Evidence-Based Inquiry (7th Edition), New Jersey: Pearson Education Inc, 2010.

[10] J. F. Hair Jr, M. Sarstedt, L. Hopkins and V. G. Kuppelwieser, "Partial least squares structural equation modeling (PLS-SEM) : An emerging tool in business research," *European Business Review Vol. 26 No. 2,* pp. 196-121, 2014.

Check 36. Proceeding NICTE-3.pdf

ORIGINALITY REPORT

89%	3%	89%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Ahmad Nurul Fajar, Frits Septian Johanes, Abba Suganda Girsang, Gunawan Wang. "Evaluation of the used of visual electronic banking system application using UTAUT 2 in Bank Central Asia corporation", IOP Conference Series: Materials Science and Engineering, 2018 Publication	89%

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	On		